

### REMARKS

Applicants wish to thank Examiner Hanan for his suggestions and help in making this Supplemental Amendment possible.

The USPTO takes the position the position that the structure in Benesh (U.S. Patent 5,494,407) Fig. 2 shows *one* vane. Applicant believes that Benesh (U.S. Patent 5,494,407) Fig. 2 clearly shows two vanes. Claim 1 is currently amended to recite the limitation that the cross section of the concave surface of the vane in a plane perpendicular to the rotational axis of the Savonius rotor is a continuous curve. Hence, claim 1 does not read on Benesh (U.S. Patent 5,494,407).

The cross section of the concave side of the vanes of Benesh in a plane perpendicular to said rotational axis is seen in Fig. 2 of Benesh and reproduced in Fig. 2 of the instant application. The projection of each of these concave sides of Benesh is "J" shaped. Each of these projected curves is continuous. However, no exhaust channel is disclosed through either of the two vanes providing a flow path *through* the at least one Savonius rotor vane from the concave side to the convex side.

The cross sectional curves of the *two* vanes of Benesh in a plane that is perpendicular to the axis of rotation do not touch one another, and are thus discontinuous. Mathematically speaking, a function,  $f(x)$ , is continuous at any point  $x = a$  if:

1.  $f(x)$  is defined on an open interval containing  $a$
2.  $\lim_{x \rightarrow a} f(x)$  exists
3.  $\lim_{x \rightarrow a} f(x) = f(a)$

The last requirement implies  $\lim_{x \rightarrow a^-} f(x) = f(a)$  and  $\lim_{x \rightarrow a^+} f(x) = f(a)$ .

Hence, because the pair of vanes of Benesh do not satisfy the limitation of: "a projection of said concave side of said at least one vane on a plane perpendicular to said rotational axis describing a continuous curve," Benesh did not anticipate every limitation to either of the above proposed amended claims 1.

Independent claims 11 and 16 are likewise amended to recite the limitation that the cross section of the concave surface of the vane in a plane perpendicular to the rotational

axis of the Savonius rotor is a continuous curve. Hence, claims 11 and 16 do not read on Benesh.

Accordingly, because all claims 1-20 are believed to be clearly allowable, a notice to that effect is earnestly solicited.

Respectfully submitted,

ART WHITWORTH

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